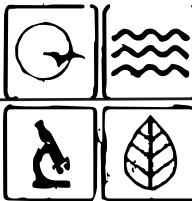


Texas County
Dairy Farmers of America, Inc.
MO-0002828



Missouri Department of
NATURAL RESOURCES

Michael L. Parson, Governor

dnr.mo.gov

Carol S. Comer, Director

July 31, 2019

Dairy Farmers of America, Inc.
10220 North Ambassador Drive
Kansas City, MO 64153

Re: Dairy Farmers of America, Cabool, MO

**UNSATISFACTORY FINDINGS
RESPONSE REQUIRED**

Dear Permittee:

Staff from the Missouri Department of Natural Resources conducted a storm water inspection on the Dairy Farmers of America, Cabool, MO located in Texas County.

Compliance with the Missouri Clean Water law was evaluated. The enclosed report is being issued with Unsatisfactory Findings for the violations identified.

Please refer to the enclosed report for details on findings and required actions. A written response documenting action taken to correct the Unsatisfactory Findings is required by the date specified in the report.

Fact sheets are available on the Department's website to assist entities with understanding and following environmental requirements.

The Department records will document continued noncompliance of the environmental laws and regulations until the required actions are completed. Please understand that failure to respond or address ongoing violations may result in a follow-up inspection.

If you have any questions or would like to schedule a time to meet with department staff to discuss compliance requirements, please contact me at the Southeast Regional Office, 2155 N. Westwood Blvd., Poplar Bluff, MO 63901 or call (573) 840-9750.

Sincerely,

SOUTHEAST REGIONAL OFFICE

Josh Wilkerson
Chief, Water Pollution Unit

Enclosures: Report of Compliance Inspection

C: Jason Henley, Plant Operator, 950 Metrecal Place St., Cabool, MO 65689
Recycled paper

**Missouri Department of Natural Resources
Southeast Regional Office/Water Protection Program
Report of Inspection
Dairy Farmers of America, Cabool, MO
950 Metrecal Trace Street/Cabool/Texas County
MO-0002828
July 31, 2019**

Introduction

Pursuant to Section 644.026.1 RSMo of the Missouri Clean Water Law, I conducted a routine storm water compliance inspection of Dairy Farmers of America, Cabool, MO (DFA) in Texas County, Missouri, on July 16, 2019.

Participants in the inspection were:

Dairy Farmers of America, Cabool, MO:

Keith Riley	EHS Coordinator	(417) 962-1858
Jason Henley	Plant Operator	(417) 254-4081
Terry Collins	Plant Operator	(417) 254-4081

MoDNR:

John Chronister	Environmental Specialist III	(573) 840-9786
Frank Shovlin	Water Specialist	(573) 840-9023

This inspection was conducted to determine the facility's compliance with Missouri State Operating Permit (MSOP) MO-0002828, the Missouri Clean Water Commission Regulations, and the Missouri Clean Water Law. This report presents the findings and observations made during the compliance inspection.

Entity Description and History

MSOP MO-0002828 was last issued on February 1, 2017, and expires on December 31, 2021. This permit sets forth effluent limitations, monitoring requirements, and permit conditions, both standard and specific, that the permittee is to follow.

DFA's wastewater passes through a trickling filter, a clarifier, an oxidation ditch, a final clarifier, and is discharged to the Cabool Wastewater Treatment Plant, MSOP MO-0026301. The industrial sludge generated from the intermediate clarifier passes through a waste clarifier and is stored in (2) sludge storage tanks before it is land applied. Overflow from the tanks goes back to the treatment facility.

Permitted Features 001, 003, and 004 Covered under MSOP MO-R130154

Permitted Feature 002 Eliminated

Permitted Feature 005 (1) 83,000-gallon steel storage tank, (1) 132,000-gallon steel storage tank-Industrial sludge-SIC #2023, #2026, #2032. The legal description for this feature is NW ¼, SW ¼, Section 12, T28N, R11W, Texas County, UTM Coordinates X=579726,

030302

Y=4108564. The receiving stream for this feature is Tributary to Big Piney River, watershed number 10290202-0101.

Permitted Feature 006 Land application site GWA, 100 acres. The legal description for this feature is listed on the permit as S 1/4, SE 1/4, Section 11, T28N, R11W, Texas County, UTM coordinates X=578961, Y=4108153. The receiving stream for this facility is Tributary to Big Piney River, watershed number 10290202-0101.

Permitted Feature 007 Land application site BWB, 160 acres. The legal description for this feature is listed on the permit as NE 1/4, Section 14, T28N, R11W, Texas County, UTM coordinates X=579025, Y=4107504. The receiving stream for this facility is Tributary to Big Piney River, watershed number 10290202-0101.

Permitted Feature 008 Land application site BWC, 160 acres. The legal description for this feature is listed on the permit as N 1/2, Section 23, T28N, R11W, Texas County, UTM coordinates X=578499, Y=4105673. The receiving stream for this facility is Tributary to Big Piney River, watershed number 10290202-0101.

Permitted Feature 009 Land application site JBA, 27 acres. The legal description for this feature is listed on the permit as SW 1/2, Section 26, T28N, R11W, Texas County, UTM coordinates X=578285, Y=4103478. The receiving stream for this facility is Tributary to Hungry Creek, watershed number 11010006-0101.

Permitted Feature 010 Land application site JBB, 160 acres. The legal description for this feature is listed on the permit as SW 1/4, SW 1/4, Section 25, T28N, R11W, Texas County, UTM coordinates X=578961, Y=4108153. The receiving stream for this facility is Tributary to Beeler Branch, watershed number 10290202-0101.

Permitted Feature 011 Land application site JWA, 40 acres. The legal description for this feature is listed on the permit as N 1/2, NW 1/4, Section 20, T29N, R10W, Texas County, UTM coordinates X=582954, Y=4115851. The receiving stream for this facility is Tributary to Big Piney River, watershed number 10290202-0103.

Permitted Feature 012 Land application site JWB, 40 acres. The legal description for this feature is listed on the permit as E 1/2, SE 1/4, Section 17, T29N, R10W, Texas County, UTM coordinates X=583959, Y=4116537. The receiving stream for this facility is Tributary to Big Piney River, watershed number 10290202-0103.

Permitted Feature 013 Land application site JWD, 100 acres. The legal description for this feature is listed on the permit as S 1/2, Section 17, T29N, R10W, Texas County, UTM coordinates X=583359, Y=4116612. The receiving stream for this facility is Tributary to Big Piney River, watershed number 10290202-0103.

Permitted Feature 014 Land application site JWE, 200 acres. The legal description for this feature is listed on the permit as W 1/2, SW 1/4, Section 9, T29N, R10W, Texas County, UTM coordinates X=584267, Y=4118083. The receiving stream for this facility is Tributary to Big Piney River, watershed number 10290202-0103.

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Permitted Feature 015 Land application site LT, 27 acres. The legal description for this feature is listed on the permit as NW ¼, Section 32, T29N, R10W, Texas County, UTM coordinates X=582934, Y=4112332. The receiving stream for this facility is Big Piney River, watershed number 10290202-0103.

Land Application. Actual sludge production: 1,172,500 gallons/year, 141 dry tons/year
Application rate: Plant Available Nitrogen (PAN)

Equipment Type: Tank Truck

Equipment Capacity: 3,500 gallons

Vegetation: Pasture

Discussion of Inspection and Observations

Prior to the inspection, the files, MSOP MO-0002828, and Permit Conditions and for Dairy Farmers of America, Inc. were reviewed.

The inspection was conducted during normal business hours. Prior notification of the inspection was provided to ensure timely access to the site. Upon arrival, I met with Keith Riley, EHS Coordinator, Jason Henley, Plant Operator, and Terry Collins, Plant Operator and discussed the purpose scope of the inspection. Mr. Riley granted permission to access the site and he Mr. Henley, and Mr. Collins accompanied me and Mr. Shovlin throughout the inspection of the facility.

We began at the head of the plant where the influent is pumped into (2) aerated 132,000-gallons equalization tanks. Aeration is provided by (2) Kaeser blowers. Two (2) 8" pumps move the effluent from the equalization tanks to the trickling filter. The trickling filter is also equipped with (1) recirculation pump to keep the media wet when there is no or low flow through the plant. This area has recently been upgraded with new pumps and plumbing. According to Mr. Henley, the traveling arm on the trickling filter is greased weekly and the orifices are cleaned 1-2 times monthly.

After passing though the trickling filter, wastewater flows through the floc ditch and is pumped to the intermediate clarifier by (2) 4" pumps. According to Mr. Riley and Mr. Henley, upgrades are planned for this part of the plant. The wastewater then passes through the intermediate clarifier and flows to the oxidation ditch.

The oxidation ditch is covered and is equipped with (6) rotors. Mr. Henley stated he tries to maintain at least (1) mg/L of dissolved oxygen (DO) in the ditch. At the time of the inspection, (3) rotors were running and DO in the ditch measured 3 mg/L. The number of rotors operating depends on the air temperature. More are required during hot weather and fewer during cold weather. The rotors are serviced periodically at the frequency recommended by the manufacturer.

Mixed liquor from the ditch flows through a splitter valve and into (2) final clarifiers. Like the pumps on the trickling filter, the splitter valve has been recently upgraded and replaced. There was a significant amount of foamy/frothy material floating on each clarifier. Sprinklers had been installed to settle the material, but it did not appear to be working well. Mr. Henley stated they were looking into a chemical treatment to eliminate this issue.

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There are (2) 7-hp return activated sludge (RAS) pumps and (2) 5-hp waste activated sludge (WAS) pumps. As their names imply, RAS pumps return activated sludge to the ditch and WAS pumps send activated sludge to, in this instance, (4) 9000-gallon decant tanks. According to Mr. Henley, they waste 2-6 hours each day. One tank is decanted each day. The supernatant is returned to the ditch and the sludge is sent to the sludge holding tanks; (1) 132,000-gallon tank and (1) 80,000-gallon tank. There is approximately 33 days of storage in the 132,000-gallon tank and 20 days of storage in the 80,000-gallon tank. Sludge is then land applied on leased property by Hill House of Verona, Missouri. Mr. Henley stated he tests for pH and percent solids each day sludge is land applied.

The effluent from the final clarifiers discharges to an "effluent mixing basin" and then flows to the City of Cabool's collection system. I observed the same material in this basin that I observed in the final clarifiers.

Mr. Riley stated Dairy Farmers of American, Inc. has spent \$1.7 million on upgrades this year and has plans for "phase 2" upgrades.

We walked back to the office and wastewater lab and associated documentation. The lab was clean, neat, and tidy. Calibration standards were within the expirations dates. Lab equipment appeared to be in good condition, but they did not have a certified thermometer, the scales had not been recertified in some time, they are not maintaining a Quality Assurance/Quality Control (QA/QC) for their lab equipment, and they do not have the latest edition of Standard Methods. Mr. Riley and Mr. Henley stated they would correct these issues as soon as possible.

We thanked Mr. Riley and Mr. Collins for their time and assistance and then followed Mr. Henley to one of the land application fields. The site was fenced, the gate was locked, and it appeared to be well maintained. However, it was not marked as required by MSOP MO-0002828. According to Mr. Henley, not all of the sites listed on the permit are used and none of the sites used are marked. I recommended that sites without contracts should be removed from their permit and those still used must be marked.

After reviewing my findings, I thanked Mr. Henley for his time and assistance and returned to the office.

Sampling and Monitoring

The appropriate sampling materials were taken on the inspection, including a copy of the Missouri Department of Natural Resources' Standard Operating Procedures for Sampling. Instruments for field monitoring were taken on the inspection that are capable of testing pH, temperature, conductivity, and dissolved oxygen.

There was no discharge of storm water at the time of the inspection.

Compliance Determination and Required Actions

Based upon observations made at the time of the inspection and a review of Discharge Monitoring Reports, the facility is **not in compliance** with the Missouri Clean Water Law, the Clean Water Commission Regulations, and MSOP MO-0002828.

Unsatisfactory Findings

1. The material observed on the final clarifiers and in the "mixing basin" is similar in appearance to the material accumulating in and causing operational issues with the Cabool Wastewater Treatment Facility (WWTF).

Required Action: Every effort must be made to prevent the material observed on the final clarifiers and in the "mixing basin" from being discharged to the City of Cabool's collection system. It is possible this material is causing or contributing to interference and/or pass through at the Cabool WWTF, which is a violation of General Pretreatment Regulations, 40 CFR Part 403. Please keep the Department informed regarding efforts or planned upgrades to minimize these potential occurrences.

2. A lack of proper lab equipment and observance of procedures set forth in Standard Conditions will make the reported data suspect.
 - A. Obtain a certified thermometer, check all other thermometers against it, and record the readings daily.
 - B. Recertify the scale.
 - C. Obtain a copy of Standard Methods no older than the 22nd edition.

Required action: By September 2, 2019, correct item 2. Please provide documentation verifying the corrections.

3. The permitted features were not marked as required by MSOP MO-0002828.

Required action: By September 2, 2019, post signs at permitted features with their respective numbers (Permitted Feature 005, Permitted Feature 006, etc).

Recommendations

A QA/QC log should be kept on the facility's lab equipment. Whenever the equipment is calibrated or serviced, the date, time, personnel conducting the calibration/service of the equipment, and the results should all be recorded in a QA/QC log.

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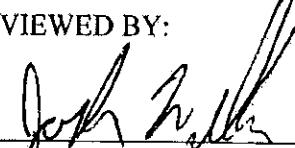
Comments

I would like thank Mr. Riley, Mr. Henley, and Mr. Collins for their time and assistance during the inspection.

SUBMITTED BY:


John Chronister
Environmental Specialist III
Southeast Regional Office

REVIEWED BY:


Josh Wilkerson
Chief, Water Pollution Unit
Southeast Regional Office

Attachment 1-Photographs 1-3
Attachment 2-Photographs 4-6
Attachment 3-Photographs 7-9
Attachment 4-Photographs 10-12
Attachment 5-Photographs 13-15
Attachment 6-Aerial image

000307

Attachment #1-Photos 1 through 3



Photo #: 001
By: John Chronister
Facility: Dairy Farmers of America, Inc.
Permit: MO-0002828
Location: Texas County

Description: New plumbing @ equalization tanks

Date/Time Taken: 7/16/2019
Program: WPC Unit



Photo #: 002
By: John Chronister
Facility: Dairy Farmers of America, Inc.
Permit: MO-0002828
Location: Texas County

Description: Equalization tanks

Date/Time Taken: 7/16/2019
Program: WPC Unit



Photo #: 003
By: John Chronister
Facility: Dairy Farmers of America, Inc.
Permit: MO-0002828
Location: Texas County

Description: Blowers @ equalization tanks

Date/Time Taken: 7/16/2019
Program: WPC Unit

Attachment #2-Photos 4 through 6



Photo #: 004
By: John Chronister
Facility: Dairy Farmers of America, Inc.
Permit: MO-0002828
Location: Texas County

Description: New pumps @ trickling filter

Date/Time Taken: 7/16/2019
Program: WPC Unit



Photo #: 005
By: John Chronister
Facility: Dairy Farmers of America, Inc.
Permit: MO-0002828
Location: Texas County

Description: Trickling filter

Date/Time Taken: 7/16/2019
Program: WPC Unit

Photo #: 006
By: John Chronister
Facility: Dairy Farmers of America, Inc.
Permit: MO-0002828
Location: Texas County

Description: Floc ditch

Date/Time Taken: 7/16/2019
Program: WPC Unit

Attachment #3-Photos 7 through 9



Photo #: 007
By: John Chronister
Facility: Dairy Farmers of America, Inc.
Permit: MO-0002828
Location: Texas County

Description: Intermediate clarifier

Date/Time Taken: 7/16/2019
Program: WPC Unit



Photo #: 008
By: John Chronister
Facility: Dairy Farmers of America, Inc.
Permit: MO-0002828
Location: Texas County

Description: Oxidation ditch

Date/Time Taken: 7/16/2019
Program: WPC Unit



Photo #: 009
By: John Chronister
Facility: Dairy Farmers of America, Inc.
Permit: MO-0002828
Location: Texas County

Description: Rotor

Date/Time Taken: 7/16/2019
Program: WPC Unit

Attachment #4-Photos 10 through 12

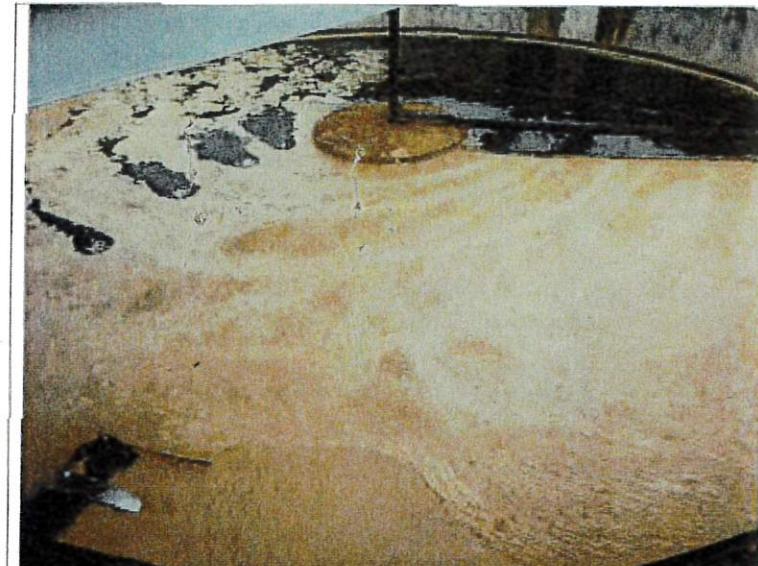


Photo #: 010
By: John Chronister
Facility: Dairy Farmers of America, Inc.

Permit: MO-0002828
Location: Texas County

Description: Final clarifier

Date/Time Taken: 7/16/2019
Program: WPC Unit



Photo #: 011
By: John Chronister
Facility: Dairy Farmers of America, Inc.

Permit: MO-0002828
Location: Texas County

Description: "Mixing basin"

Date/Time Taken: 7/16/2019
Program: WPC Unit



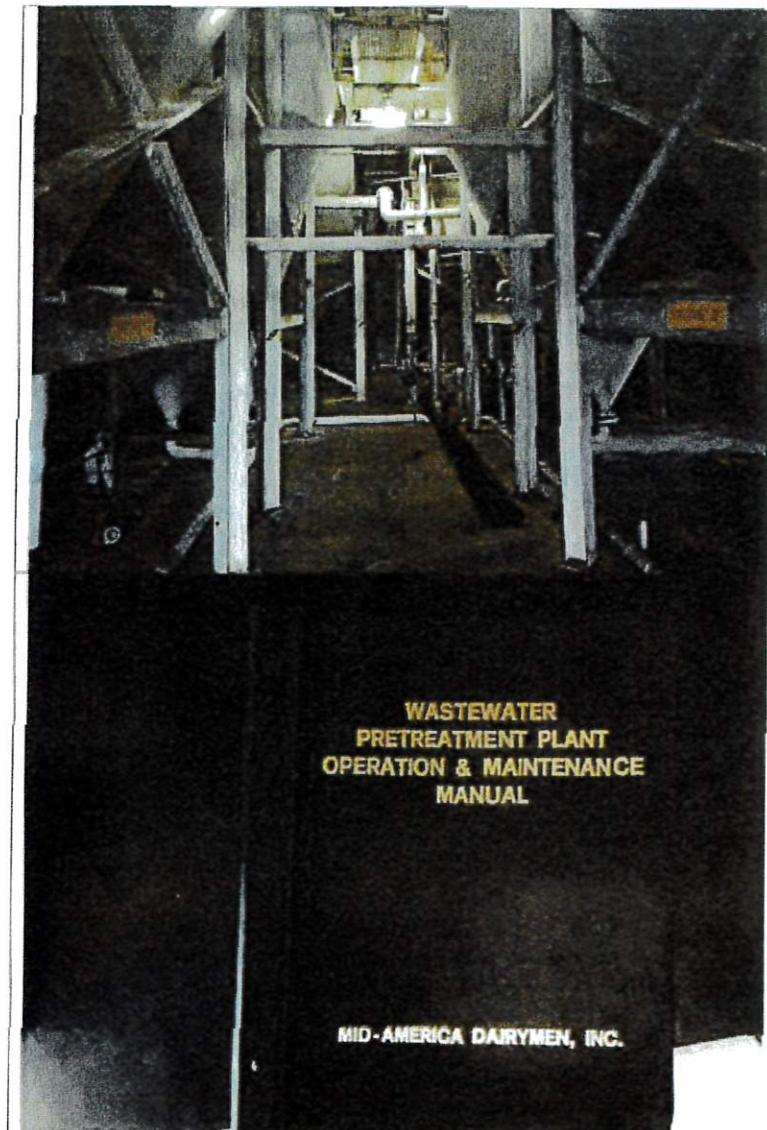
Photo #: 012
By: John Chronister
Facility: Dairy Farmers of America, Inc.

Permit: MO-0002828
Location: Texas County

Description: Decant tanks

Date/Time Taken: 7/16/2019
Program: WPC Unit

Attachment #5-Photos 13 through 15



WASTEWATER
PRETREATMENT PLANT
OPERATION & MAINTENANCE
MANUAL

MID-AMERICA DAIRYMEN, INC.



Photo #: 013
By: John Chronister
Facility: Dairy Farmers of America, Inc.

Permit: MO-0002828
Location: Texas County

Description: Decant tanks

Date/Time Taken: 7/16/2019

Program: WPC Unit

Photo #: 014
By: John Chronister
Facility: Dairy Farmers of America, Inc.

Permit: MO-0002828
Location: Texas County

Description: O & M Manual

Date/Time Taken: 7/16/2019

Program: WPC Unit

Photo #: 015
By: John Chronister
Facility: Dairy Farmers of America, Inc.

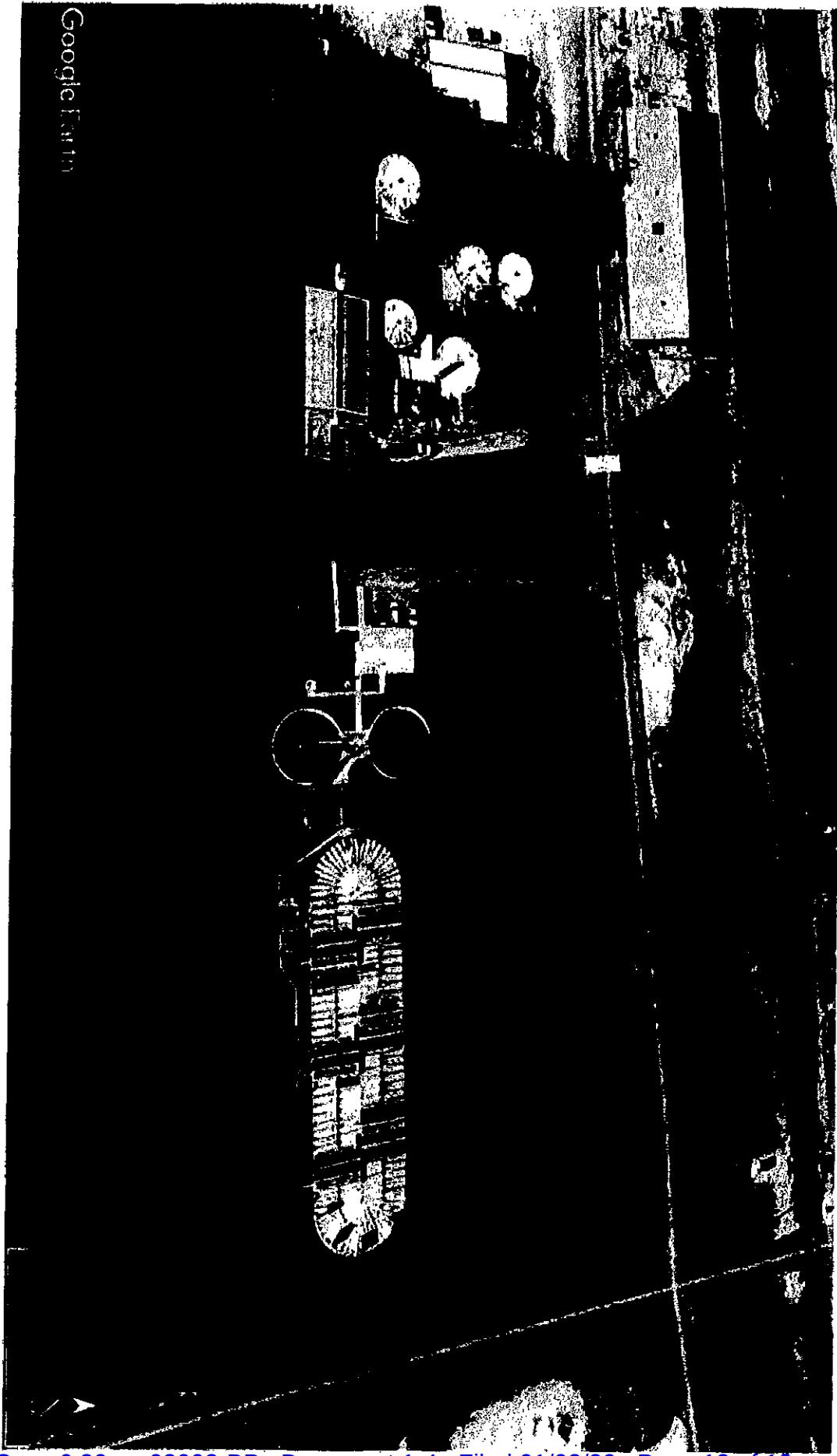
Permit: MO-0002828
Location: Texas County

Description: Land application field

Date/Time Taken: 7/16/2019

Program: WPC Unit

12



Google Earth

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